

Interest Insight

Use simple interest to track money over time.

HIGH SCHOOL • MA.912.FL.1

MA.912.FL.1 "Build mathematical foundations for financial literacy."

NAME _____

DATE _____

SIMPLE INTEREST

Simple interest is money earned or charged only on the original principal. Use $I = Prt$, where P is the principal, r is the annual rate written as a decimal, and t is time in years. Add the interest to the principal with $A = P + I$ when you need the total amount.

WORKED EXAMPLE

Find the simple interest and total amount for \$300 invested at 4% for 2 years.

1. Write $P = 300$, $r = 0.04$, and $t = 2$.
2. Find interest: $I = Prt = 300(0.04)(2)$.
3. Multiply: $I = 24$.
4. Add to principal: $A = 300 + 24 = 324$.

Answer: Interest: \$24; total amount: \$324

PRACTICE 6 problems

- 1** Find the simple interest on \$500 at 6% for 1 year.

ANSWER _____

- 2** Find the simple interest on \$800 at 3% for 5 years.

ANSWER _____

- 3** A deposit of \$250 earns 8% simple interest for 3 years. Find the total amount.

ANSWER _____

- 4** A \$900 deposit earns \$45 in simple interest in 1 year. What annual interest rate was used?

ANSWER _____

- 5** A deposit earns \$75 in simple interest at 5% for 3 years. What was the principal?

ANSWER _____

- 6** \$700 earns \$105 in simple interest over 3 years. What annual interest rate was used?

ANSWER _____

APPLY IT Show your work

- 1** After a summer job, Kai puts \$1,500 into a savings account that pays 6% simple interest each year. If Kai leaves the money in the account for 3 years, how much interest will Kai earn, and what will the account total be?

WORK SPACE

ANSWER _____

- 2** Mia borrows \$450 to buy a laptop. The loan charges 8% simple interest per year, and Mia repays it after 18 months. How much interest does Mia pay, and how much does she repay in all?

WORK SPACE

ANSWER _____

CHALLENGE One step up

CHALLENGE

Two loans each have a principal of \$800. Loan A charges 7% simple interest for 3 years. Loan B charges 5% simple interest for 5 years. Which loan costs less in total, and how much less does it cost?

PART 1 • PRACTICE

#	PROBLEM	ANSWER
1	Find the simple interest on \$500 at 6% for 1 year.	\$30
2	Find the simple interest on \$800 at 3% for 5 years.	\$120
3	A deposit of \$250 earns 8% simple interest for 3 years. Find the total amount.	\$310
4	A \$900 deposit earns \$45 in simple interest in 1 year. What annual interest rate was used?	5%
5	A deposit earns \$75 in simple interest at 5% for 3 years. What was the principal?	\$500
6	\$700 earns \$105 in simple interest over 3 years. What annual interest rate was used?	5%

PART 2 • APPLY IT

- Interest: \$270; total amount: \$1,770** Use $I = Prt = 1500(0.06)(3)$ to find \$270 in interest. Add \$270 to the original \$1,500.
- Interest: \$54; total repayment: \$504** Convert 18 months to 1.5 years, then use $I = 450(0.08)(1.5)$ to find \$54. Add the interest to \$450.

CHALLENGE

Loan A costs less. Loan A totals \$968, Loan B totals \$1,000, so Loan A costs \$32 less.

Accept rates written as decimals when equivalent, such as 0.05 for 5%. For total amount answers, require that students add the simple interest to the principal.